ADVANCED ESTHETICS & INTERDISCIPLINARY DENTISTRY

Education Series

PORCELAIN VENEER PREPARATION

Frank M. Spear, DDS, MSD
# Porcelain Veneer Preparation

**Frank M. Spear, DDS, MSD**

*Seattle Institute for Advanced Dental Education*

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This presentation focuses on preparing teeth for all-ceramic veneers. In the last 20 years, ceramic veneers have accomplished truly amazing things for dental professionals and their patients. Yet, despite the time that’s passed since their introduction, numerous questions remain about how to prepare the teeth for veneers: What should you do with the incisal edge? How much should you reduce?

With that in mind, this presentation will demonstrate the manner in which teeth can be prepared for porcelain veneers under different clinical situations: when very conservative preparations can be used; when more aggressive preparations are required; and when teeth are discolored or have pre-existing restorations. Photographs of preparations from actual clinical patients—as well as images showing techniques on a DentoForm—will help to demonstrate the preparation process and the armamentarium (Table 1.1) that is used.

### Table 1.1 ARMAMENTARIUM FOR TOOTH PREPARATION

<table>
<thead>
<tr>
<th>Handpieces</th>
<th>Diamonds &amp; Burs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-dec air drier, foot controlled</td>
<td>KS-0 1 mm diameter medium grit round ended diamond</td>
</tr>
<tr>
<td></td>
<td>Used for the interproximal area and extending the interproximal margins</td>
</tr>
<tr>
<td>Air driven, high-speed handpiece</td>
<td>KS-1 1.2 mm diameter coarse grit diamond</td>
</tr>
<tr>
<td></td>
<td>Used for incisal reduction and depth cuts, as well as sometimes for facial depth</td>
</tr>
<tr>
<td></td>
<td>in full-coverage crowns</td>
</tr>
<tr>
<td>Brushless electric handpiece</td>
<td>KS-2 1.4 mm diameter round ended diamond</td>
</tr>
<tr>
<td></td>
<td>Not used much for porcelain veneers</td>
</tr>
<tr>
<td>High-speed brownie</td>
<td>KS-4 Football shaped diamond</td>
</tr>
<tr>
<td></td>
<td>KS-5 Teardrop shaped diamond</td>
</tr>
<tr>
<td></td>
<td>Both used for developing lingual concavities for full-coverage crowns</td>
</tr>
<tr>
<td></td>
<td>KS-6 Very large round ended diamond</td>
</tr>
<tr>
<td></td>
<td>Used to create the lingual chamfer along the incisal edge</td>
</tr>
<tr>
<td></td>
<td>0.3 mm depth cutter Used for very good colored teeth when placing ultra-thin</td>
</tr>
<tr>
<td></td>
<td>feldspathic veneers</td>
</tr>
<tr>
<td></td>
<td>0.5 mm depth cutter Used routinely for veneers when slightly changing colors or</td>
</tr>
<tr>
<td></td>
<td>the shape by “moving” a tooth lingually</td>
</tr>
<tr>
<td></td>
<td>0.7 mm depth cutter Used for preparing discolored teeth</td>
</tr>
<tr>
<td></td>
<td>283012 bur Used for beveling margins (e.g., inlays or gold onlays)</td>
</tr>
<tr>
<td></td>
<td>7901 carbide bur Used when seating veneers to clean the embrasures</td>
</tr>
<tr>
<td></td>
<td>White Stone Used for repolishing margins</td>
</tr>
</tbody>
</table>

*Disclaimer: The author receives royalties from the sale of some of these burs (Brasseler® USA, Savannah, GA).
Basic Preparation Protocol

Typically we prepare teeth because we need to remove either caries or pre-existing restorations (Figure 1.1). Teeth are also prepared in order to create room for the ceramic veneer material. If you will be adding 0.5 mm or 0.75 mm of ceramic, you will need to remove something or risk producing a restoration that is too thick. Additionally, teeth are prepared in order to create a path of insertion.

1. Identify pre-existing restorations and discoloration and, if present, define the discoloration and the nature of the desired color change.

2. Identify the desired incisal edge position and contours of the final veneers so that any depth cuts will be related to the desired position, not the current one.

3. Remove caries or pre-existing restorations in order to create room for the veneer material, as well as create a path of insertion (Figure 1.2). Note: consult with your laboratory ceramist for specific preparation and tooth reduction requirements based on the veneer material selected.

4. Reduce the incisal edge by 1.5 mm to 2.0 mm from the desired incisal edge position that was identified in Step 2 using a KS-1 bur (Figure 1.3).

5. Now, begin to reduce the facial aspect by creating depth cuts in the facial surface (Figure 1.4). Note: your goal should be to only remove enough tooth structure so that the veneer will accommodate the color change that the patient desires (Table 1.2), which should have been determined in Step 1.

6. Remove the facial structure so that the depth is smooth and flowing, but still supragingival (Figure 1.5). A KS-1 bur can be used for this purpose.

7. Determine how far to extend the interproximal preparation(s). If the selected veneers will be changing color significantly—or there are pre-existing restorations (e.g., Class III composites)—prepare through the interproximal zone and break the contact. If the veneers will be changing tooth contour, closing an embrasure, or closing a diastema, then prepare the tooth through to the lingual aspect in order to provide the laboratory ceramist with sufficient space to create the correct contour.

<table>
<thead>
<tr>
<th>Shade Change Desired</th>
<th>Thickness of Porcelain</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>.3 mm</td>
</tr>
<tr>
<td>1 to 2 shades</td>
<td>.5 mm to .6 mm</td>
</tr>
<tr>
<td>3 to 4 shades</td>
<td>.7 mm to .9 mm</td>
</tr>
<tr>
<td>More than 4 shades</td>
<td>1.0 mm to 1.4 mm</td>
</tr>
</tbody>
</table>

Table 1.2 REDUCTION GUIDE
8. Use a diamond strip to clean the interproximal preparations prior to taking impressions to ensure that there is no debris connecting the teeth.

9. Decide whether a supragingival or subgingival cervical margin will be placed (Table 1.3) and prepare the tooth accordingly (Figure 1.6). For the cervical finish line, use the KS-0 bur, but only apply about half the width of the bur tip, which is approximately .5 mm, just to create a nice finish line around the cervical portion of each tooth.

10. Finalize the incisal edge preparation (e.g., 90° butt margin or extended over to the lingual) based on the thickness of the tooth. Note: the extent of the preparation’s convexity determines the reduction required on the lingual aspect of the incisal edge. If the tooth is very thin, place a 90° butt margin. If the tooth is thick, then create a slight chamfer up the lingual surface.

11. Verify the path of insertion of the lingual incisal edge with the facial cervical margin. Specifically, look to see that the lower incisor hits the margin for the veneer and the ceramic, with tooth structure still remaining underneath so that the ceramic will be under compressive force.

12. Finish and polish the preparation and its margins using a white stone (Figure 1.7). Note: you can use the edges of the KS-6 bur to shape the white stone to whatever shape is desired for the teeth/preparations you’re creating; typically the white stone is parallel with a slightly rounded or flattened end.

The Challenge of Malaligned Teeth

Preparing maligned teeth for multiple veneer restorations presents a much more difficult situation for clinicians (Figure 1.8). For example, patients may complain that their final veneer restorations are too thick—even if they don’t look that way—when preparation rules are applied to the facial aspects of malaligned teeth without consideration for the lingual aspect (Figure 1.9).

For a patient with malaligned teeth, it is imperative that you perform a diagnostic wax-up and, in wax, reshape the lingual aspect so that you know what is required for the actual preparation. Then, you can create a clear matrix based on that adjusted wax-up for use in the mouth as a preparation guide. In some instances, such as when there is substantial rotation that would require significant tooth reduction, patients may prefer to undergo orthodontic treatment.

Table 1.3 GINGIVAL MARGIN PLACEMENT FOR VENEERS

<table>
<thead>
<tr>
<th>Margin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supragingival</td>
<td>When contour and color won’t be changed</td>
</tr>
<tr>
<td>Subgingival</td>
<td>Cervical color will change (e.g., preparation tooth color is dark)</td>
</tr>
<tr>
<td></td>
<td>Contour will change</td>
</tr>
<tr>
<td></td>
<td>Cervical margin is in dentin</td>
</tr>
<tr>
<td></td>
<td>Veneer will close a diastema or embrasure</td>
</tr>
</tbody>
</table>

Note: If placing multiple veneers, ensure uniformity of appearance by keeping margin placement consistent for all restorations.
Using a DentoForm for demonstration, different preparation designs and the questions associated with them are explained, including where to place the margin and how to handle the interproximal areas. Keep in mind that veneer preparations can be designed very differently depending on the color of the tooth, the shape of the tooth, and what is being accomplished with the restorations.

**Incisal Reduction**
1. Create 1.5 mm to 2 mm of incisal reduction on all teeth to be veneered (Figure 2.1). This will allow the ceramist to impart natural characterization to this area. Use the KS-1 bur for this purpose.
2. If you are lengthening the teeth with veneers, use your mock-up or wax-up as a basis for the preparations. If you are lengthening the teeth by 1 mm, you would only reduce the incisal edge by .5 mm (Figure 2.2).
3. To complete the incisal reduction, continue using the KS-1 bur or switch to the KS-6, which is a smooth bur suitable for large areas, and proceed across all teeth to be veneered.

**Facial Reduction**
1. Assuming the teeth have good color, only .5 mm or .3 mm of tooth structure needs to be removed from the facial surface. The most common reduction is .5 mm or .7 mm. 
   Note: all three depths are available in the bur cutters previously mentioned in Chapter 1.
2. Use the .3 mm depth cutter if the teeth demonstrate excellent tooth color and contour so that very thin veneers can be placed (Figure 2.3). Most commonly the .5 mm depth cutter is used.
3. Run the selected bur across the facial aspects of the teeth to be veneered.
4. Run the depth cutter down the tooth and across the facial of the affected teeth (Figure 2.4).
5. Now, reduce back the facial aspects to blend with what’s been removed. Use a KS-6 to remove the facial depth cuts (Figure 2.5).
**Interproximal Preparation**

1. Use a KS-1 bur and begin creating the finish line, which is usually .3 mm into the interproximal area.
2. If the tooth has good contour and color, proceed approximately halfway into the contact and stop (Figure 2.6).
3. Then, use a diamond strip to separate the teeth slightly.
4. Complete the finish line with a KS-0 bur or a white stone.
5. Perform the same reduction on the mesial and distal aspects.

**Finishing the Incisal Edge**

The manner in which you complete the incisal edge depends on how thick the remaining tooth structure is, as well as opposing occlusion. Your options include leaving it as a 90° butt joint or creating a slight chamfer on the lingual surface. So, examine where the occlusal contacts are on the preparations in order to facilitate the decision process.

If the occlusal contacts are actually on the lingual margin, leave the margins incisal to the centric contact or carry them apically.

1. Use the KS-6 bur to place a slight chamfer into the lingual of the incisal edge (Figure 2.7).
2. Polish this with a white stone.
3. Verify the occlusion again, and if the margin is in the area of occlusion, carry the preparation more along the lingual surface (Figure 2.8). *Note: if you prepare too far up the lingual aspect, you will change the path of insertion of your veneer such that it will be undercut with the facial surface.*
4. To remove the undercut, reduce more from the facial aspect.
5. To ensure that the veneers do not move mesial-distally, extend the lingual chamfer through the interproximal area so that the veneer will only be able to seat in one location (Figure 2.9). Use the smaller KS-1 bur to accomplish this.

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**2.6** A KS-1 bur is used to create the finish line into the interproximal area, stopping short of the contact.

**2.7** The KS-6 bur is used to place a slight chamfer into the lingual of the incisal edge.

**2.8** If the margin is still in the area of occlusion, the preparation is carried more along the lingual surface.

**2.9** The lingual chamfer is extended through the interproximal area to ensure that the veneers do not move mesial-distally.
Chapter 2: Conservative Preparations

Refining the Preparation
1. Refine the incisal portion using the white stone in a high-speed handpiece.
2. Use the white stone on lingual areas where concavity was created to refine and polish them (Figure 2.10).
3. Next, smooth and round out the incisal reduction so that no sharp corners remain.

Creating the Cervical Margins
1. Use a KS-0 bur—which is only 1 mm in diameter and sufficiently small to enable you to be incredibly conservative with your cervical margins—to create a definite margin placement.
2. If the margins will be placed subgingivally, place a layer of #1 cord at approximately .5 mm below the previously prepared margin (Figure 2.11). Verify that the cord is properly packed using a probe.
3. Carry this margin down to the top of the cord. Hold the tissue out of the way using a plastic instrument so that you can move the bur down to the cord, creating a .3 mm to .5 mm chamfer (Figure 2.12).
4. Extend this margin into the interproximal region.
5. Use the white stone to polish the cervical margin in a manner similar to how the incisal margins were polished (Figure 2.13).
When you are faced with discolored teeth or those with pre-existing restorations that must be removed, you are almost forced to reduce more, as well as extend the preparations interproximally. For demonstration purposes, the previously described conservative veneer preparations from the DentoForm will be the starting point. If these preparations were completed for discolored teeth, you would actually see the junction between the veneers and the teeth because those preparations would not have been carried under the contact. So, whenever you want to change color or close gingival embrasures, you should carry the margins inward.

One of the most common tooth discolorations that leads clinicians to prepare teeth more aggressively is tetracycline staining (Figure 3.1). Additionally, in terms of shade selection for all-ceramic veneers, another challenge is determining what color to make the restorations. When the tetracycline band is present cervically, reduction (i.e., .7 mm to .9 mm) must be used in order to provide sufficient space for the desired color to be created. What’s more, the interproximal area must be prepared to avoid the possibility of a visible margin, as explained above.

The first option is to create an elbow. However, the challenge of using an elbow is that it changes the path of insertion of the restoration; the veneer must be placed from the facial or just sit on the incisal edge and wrap into the facial.

1. Use the KS-1 bur to create a margin that goes under the contact.
2. Be sure the margin is invisible, but without breaking the contact.
3. The margin should be carried all the way into the interproximal region so that the veneer stays facial to the contact along the incisal half, but rolls in under the contact in the gingival half (Figure 3.2).

Although this is a very conservative way of creating an invisible margin, breaking the contact is also commonly done, especially if there are interproximal caries or pre-existing restorations.

1. Use the KS-1 bur and, instead of angling it to go underneath, hold it in the path of insertion and go through until it separates the contact incisal-gingivally (Figure 3.3).
2. Pay particular attention to the nature of the contact. Some teeth have a very thin contact buccal-lingually while others have very thick contacts.

3. Also, remember that often times you may have to break the contact in the incisor region, but it is not uncommon not to break the contact between the cuspid and the lateral incisor.

As with conservative preparations, it’s important to examine the path of insertion. For the challenging teeth described here, taper the tooth slightly to ensure that the veneer will come in from a more incisal direction. Create the taper in both the mesial and distal aspects (Figure 3.4).

In terms of the cuspid and lateral, how those teeth are handled will depend on how visible they are. If the patient has a very high smile line, dark teeth, and you want to ensure that the junction of the veneer doesn't show, then you will need to carry the preparation into the contact. To accomplish this, switch to the smaller KS-0 bur and carry this reduction back into the contact; you don’t necessarily need to break the contact. Placing a metal matrix band in the embrasure and holding it against the canine will enable you to run the bur in that area and produce a smooth finish line without affecting the adjacent tooth.

Preparing dark teeth also affects the amount of reduction you will need cervically. You can use the KS-0 bur, but you will create a much more significant finish line. So, whereas the veneers may be at least .7 mm thick in the facial for tetracycline stained teeth, you may need to reduce by .7 mm to .9 mm cervically.

The lingual of the incisal edge will also change slightly in this scenario. Specifically, you will need to change how it flows into the lingual chamfer. Use the KS-6 bur and blend the interproximal reduction up into the chamfer, creating significantly more reduction than is warranted for the conservative preparation.

More preparation is also required in cases in which pre-existing Class III composite restorations are present that extend onto the lingual surface. For the more aggressive preparations of such cases, use the KS-1 bur and proceed through the contact or remove the restoration completely. Then, where the composite has ended on the lingual, roll the margin past it. Essentially, the preparation would extend partway across the cingulum of the tooth (Figure 3.5).

Then, once again, you will take the chamfer from the incisal edge and flow it lingually. To refine these preparations, use the white stone to round off everything and finish the interproximal margin.

Other considerations for these challenging cases are very thin teeth, for which it is virtually impossible to prepare up the lingual surface. So, if when preparing teeth they are found to be very thin buccal-lingually, create a 90° finish line with the bur coming straight across; do not create a chamfer up the lingual surface.
All-ceramic veneer preparation is different for the cuspids and premolars because they are much thicker buccal-lingually than the incisors.

1. Begin with the cuspids using the KS-1 bur and reduce the facial surface.
2. Since you know you will want 1.5 mm to 2 mm of reduction, similar to the incisors, switch to the .5 mm or perhaps the .7 mm depth cutter and place a facial depth cut on that tooth. Alternatively, you could use the KS-6 or the KS-2.
3. Blend the depth cut to where it stops with contact with the lateral and then begin a cervical finish line with this bur.
4. Next, decide where to place the incisal margin based on an examination of the occlusion. If upon closing the contact is almost on the margin, drop the margin down slightly, more along the lingual (Figure 4.1). Use the KS-6 bur for this purpose, similar to what was done for the anteriors.
5. Create a chamfer on the lingual aspect of the cusp.
6. Once the cingulum is finished, proceed as you did with the lateral and central incisors, bringing the preparation out facially and rounding it off.
7. It's important to note that while you may break the contact on the mesial of the cusp, it would be very rare to break the contact on the distal of the cusp, unless of course there was a pre-existing restoration there.
8. Use the white stone to finish and polish the marginal areas, being sure to round off all incisal corners again.
9. Use the white stone to smooth the facial surface, finish line, and down toward the incisal edge.

The premolars also are interesting to prepare for veneers, with thicker contacts buccal-lingually. Usually the only reason veneers are placed on these teeth is to enhance the buccal cusp.

1. Perform the initial reduction of the premolars using the KS-6 bur, reducing the cusp partway down its incline (Figure 4.2). How far down depends on tooth anatomy and occlusion.
2. Use the KS-6 to create the chamfer finish line on the cusp incline.
3. To create the depth cuts, use the .7 mm depth cutter and proceed all the way down the tooth until you reach the shank. Note: usually in the premolar region you can use a .5 mm depth cutter if that is what was also used on the anterior teeth, depending on the tooth color.
4. Remember that these teeth probably require the least reduction because there is no need to extend very far interproximally.
5. Use the KS-1 bur to remove tooth structure from the facial and evaluate whether or not additional preparation is necessary on the cusp tip. Note: there is almost no reason to proceed into the distal contact area because it cannot be seen from the anterior. The distal margins of the premolars are usually to the facial of the contact. Typically all that can be seen is the mesial of the first bicuspid and the mesial of the second bicuspid.
6. Prepare the interproximal area of the first bicuspid so that the junction between the veneer and the prepared tooth won’t be visible.
7. When preparing the premolar and the cuspid, elbow underneath the distal of the cuspid and the mesial of the first bicuspid.
8. Finally, refine the cervical finish line using the KS-0, which fits nicely in between the teeth and into the interproximal region. Note: be sure to smooth the area of initial reduction on the buccal cusp, ensuring that it flows into the interproximal region and down the facial margin.
9. Polish the preparation using the white stone. Also, if necessary, use the white stone to refine the cusp reduction.

One of the variations that may be required in the posterior is accommodating a tooth with a distal-occlusal composite or amalgam restoration. In such cases, it is common to place an inlay/veneer combination.

Using the first premolar as an example:
1. Create a proximal box in the area where the restoration was (Figure 4.3). Note: the veneers will actually flow into that box from the facial.
2. Now, in the area where the occlusal portion of the pre-existing restoration was, prepare the lingual cusp for an inlay and reduce the entire buccal cusp using round ended diamonds (Figure 4.4).
3. Prepare a finish line that leaves the palatal cusp and marginal ridge so the veneer can be placed in the front of the tooth and over.
4. Refine the preparation and finish it using the white stone. Note: be sure to smooth the internal aspect of what used to be the pulp area; this finish line should be smooth and round in the area of the cusp.

4.3 To accommodate an inlay/veneer combination, a proximal box is created where the previous restoration was.

4.4 In the area where the occlusal portion of the pre-existing restoration was, the lingual cusp is prepared for an inlay and the entire buccal cusp is reduced.
Mandibular anterior veneers are challenging in some respects because the teeth are smaller.

1. Begin with incisal reduction of approximately 1.5 mm to 2 mm using the KS-1 bur (Figures 5.1 and 5.2).

2. Assuming the teeth are of good color, create approximately .5 mm of facial clearance using the .5 mm depth cutter. If they are very dark, use a .7 mm depth cut. Note: lower incisors do not have as much enamel as maxillary incisors, so a .7 mm depth cut will probably be at the border of the enamel and dentin.

3. Reduce the facial aspect down further using the KS-1 bur.

4. Ensure that there are no sharp line angles on the preparation. Note: in the early days of veneers, some people advocated leaving a sharp line angle such that the porcelain came up about .5 mm and turned over to about 1.5 mm; a lot of veneers fractured in the area of that sharp corner.

5. Roll back the facial reduction significantly across the tooth mesial-distally (Figure 5.3). This creates a much thicker area of porcelain in the areas where the most common occlusal contact occurs for anterior veneers.

6. Also, extend the preparation into the interproximal region as far as the contact to create a rounded surface using the KS-1. If the teeth are especially small, the KS-0 can be used. Note: most of the time, mandibular anterior veneer preparations may break the contact because these teeth are very thin buccal-lingually.

7. Continue by preparing the incisal edge, and the manner in which you do this will depend on the thickness of the teeth. If the mandibular incisors are very thin buccal-lingually, you cannot prepare much in that aspect.

8. To prepare between the mandibular cuspid and lateral, switch back to the KS-0 bur so that you can extend the margin back into the interproximal area (Figure 5.4). Note: a metal matrix band is invaluable to prevent alteration of the adjacent tooth.

9. Use the KS-0 also to prepare the cervical margin. Ensure that everything is smooth before proceeding to incisal edge refinement.

10. Because the mandibular anterior teeth are too thin to accommodate lingual preparations (i.e., rolling the preparations back and moving up the lingual surface), polish them off with a slight bevel using the white stone, rather than actually creating a lingual chamfer (Figure 5.5). This creates a very smooth finish line without reducing the lingual surface.

11. Finish and polish the preparation margins using the white stone.
How much do you reduce if you are lengthening teeth or bringing them facially? In these instances, you are adding to the length and bulk of the teeth. For this reason a bonded mock-up is necessary to guide tooth reduction (Figure 6.1).

For example, consider the case of a male patient with some fractured teeth as a result of an accident that occurred when he was 12 years old (Figure 6.2). Here, the goal is to lengthen his teeth a couple of millimeters, but there isn’t sufficient room. So, either the upper incisors should be brought forward, or the lower incisors brought backward.

Orthodontics were performed to strip the lower anteriors and retract them. Once this segment of the treatment was complete, a composite mock-up was performed (e.g., free-hand composite or laboratory fabricated) to determine the appropriate length and facial prominence for the proposed veneers.

1. Perform a diagnostic wax-up to determine the correct tooth form for the patient.
2. Duplicate the wax-up and create a 1.5 mm matrix (Figure 6.3). To accomplish this, make an alginate impression of the wax-up and pour it in stone so that you have a model of the diagnostic wax-up. Then use 1 mm or 1.5 mm Copyplast material and a Mini Star machine to create the matrix.
3. Try in the matrix and adjust the teeth, if necessary. If there is any place that the matrix binds, those are areas that will require tooth reduction.
4. Etch the teeth that are to be restored, keeping the etchant approximately 1.5 mm shy of the gingiva.
5. Rinse and dry the matrix, load it with provisional material (Protemp™ 3 Garant™ Temporization Material) and seat it on the teeth. Allow the temporary material to harden completely.
6. Remove the matrix and evaluate the mock-up, including esthetics, phonetics, and occlusion (Figure 6.4). This process enables you to determine if any adjustments in length are necessary before actually preparing the teeth.
7. Now, with the mock-up still in place in the mouth, reduce the incisal edge by 1.5 mm to 2.0 mm; proceed to facial reduction using a .7 mm depth cutter in order to reduce beyond the mock-up material (Figure 6.5). Note: the bottom of your depth cut will likely only be 0.1 mm to 0.2 mm into the enamel, while the incisal reduction will only be into the tooth structure by about .5 mm to 1.0 mm.
8. Use the KS-6 to smooth all of the facial depth cuts, as previously described.
9. Once the incisal and facial reduction is complete, use a curette to remove the remainder of the mock-up, which is not necessary for cervical reduction, and complete the preparations (Figure 6.6).
10. Finish and polish the preparations using a white stone, as previously described.
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• A-dec oil-free air drier; A-dec, Inc., Newberg, OR
• Copyplast; Mini Star; Great Lakes Orthodontics, Tonowanda, NY
• KS burs; white stone; high-speed brownie; diamond burs; carbide burs;
  Brasseler USA®, Savannah, GA
• Protemp™ 3 Garant™ Temporization Material; 3M™ ESPE™, St. Paul, MN